



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,119	03/26/2001	Mitsuru Maeda	862.C2158	6246
5514	7590	03/29/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			JOHNSON, TIMOTHY M	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2625

DATE MAILED: 03/29/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/816,119

Applicant(s)

MAEDA ET AL.

Examiner

Timothy M Johnson

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6, 17 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 17 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### **Election/Restriction**

1. Claims 7-16, 18-26, and 28-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in paper no. 7.
2. Applicant's election without traverse of species I, claims 1-6, 17, and 26 in Paper No 7 is acknowledged.

### **Claim for Priority**

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119 (a)-(d), which papers have been placed of record in the file.

### **Drawings**

4. The drawings are objected to because

Fig. 9, block 954, should recite "DECODER" instead of "DECORDER".

Fig. 12, block 1004, should recite "ENCODER" instead of "ENCORDER".

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. Figures 12-18C should be designated by a legend such as --Prior Art-- as only that which is old is illustrated. (See MPEP § 608.02(g)).

Art Unit: 2625

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### **Disclosure**

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The Examiner suggests the following title:

"Modification Of Detected Quantization Step Size From The Encoded Bitstream Based On A Region Of Interest (ROI) Bitmask".

### **Claim Objections**

7. Claim 27 is objected to because of the following informalities:

For claim 27, last line, change "claims" to "claim".

Appropriate correction is required.

### **Claim Rejections - 35 USC § 112**

8. The following is a quotation of the second paragraph of 35 U.S.C 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-6, 17, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2625

For claims 1 and 17, both on the penultimate line, "one of the images" lacks antecedent basis.

10. The following is a quotation of the first paragraph of 35 U.S.C 112:

The specification shall contain a written disclosure of the invention, and the manner and process of making an using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-6, 17, and 27 are rejected under 35 U.S.C. 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention.

For the last two lines of both claims 1 and 17, "selecting one of the images encoded in the first and second stages" does not appear to be supported by Applicant's specification. Rather, the specification teaches quantizing different portions of the image differently iteratively in what the claim refers to as "stages". But the image is the same image with a region of interest (ROI) that has been quantized differently. Thus, there are not two different images from which to select as claimed.

### **Claim Rejections - 35 USC § 103**

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

Art Unit: 2625

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-6, 17, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wine et, 6,477,201, in view of Boyce et al., 5,825,927.

For claim 1, an image processing apparatus for encoding an image which contains a region to be encoded to have higher image quality than surrounding portions is provided by Wine in at least the abstract and the paragraph bridging cols. 2-3. Detection means for detecting a quantization step from a bitstream of the image encoded in a first stage is not explicitly provided by Wine, but is conventional and well known, and is at least suggested by Wine in at least c. 8, lines 18-36, where a quantization value may be part of the encoded bitstream. In any case, this is clearly the case as taught by Boyce in at least the last full paragraph in c. 2 and alternatively in third full paragraph in c. 7. The quantization value of Boyce is the same as that of Wine, and can therefore be used as the quantization of Wine. It would've been obvious to one having ordinary skill in the art at the time the invention was made to use the quantization value of Boyce, since such a value can be used for at least the advantage of a desired rate control and can also be used in the enhancement of high resolution images as noted in the third full paragraph in c. 3 of Boyce. Quantization step control means for controlling the detected quantization step is provided by Wine in at least the paragraph bridging cols. 4-5, the paragraph bridging cols. 5-6, c. 8, lines 6-36, and c. 8. line 59 – c. 9, line 20. Selection means for encoding the image in a second stage using the controlled quantization step is provided by Wine in conjunction with Boyce, where

Art Unit: 2625

the quantization step is determined in accordance with at least a first stage, and alternatively as shown in at least Fig. 2 of Wine. Selecting one of the images encoded in the first and second stages is considered provided by at least Wine, where several images are encoded and are selected based on the mask and other criteria in at least Fig. 2 of Wine, and where Wine also provides for selecting regions of the images more in agreement with Applicant's specification.

For claim 2, the apparatus according to claim 1, wherein said selection means detects the presence/absence of a block outside the region from the bitstream is provided by Wine by at least the mask information in at least the third full paragraph in c. 6 to the fourth full paragraph in c. 8.

For claim 3, the apparatus according to claim 1, wherein said quantization step control means updates the quantization step when said selection means detects only a block inside the region from the image is provided by Wine by at least the mask information, which is used to control the quantization step in block regions in at least the third full paragraph in c. 6 to the fourth full paragraph in c. 8.

For claim 4, the apparatus according to claim 3, wherein said quantization step control means updates until a block outside the region is obtained is provided by Wine by at least the mask information, which is used to control the quantization step in block

Art Unit: 2625

of both the regions and blocks outside of the region in at least the third full paragraph in c. 6 to the fourth full paragraph in c. 8.

For claim 5, the apparatus according to claim 4, wherein said quantization step control means updates the quantization step to be larger than that before update is provided by Wine by at least the mask information, which is used to control the quantization step in block regions using either better or worse quantization, thus corresponding to smaller or larger quantization in at least the third full paragraph in c. 6 to the fourth full paragraph in c. 8. This corresponds to Applicant's disclosed coarse quantization.

For claim 6, the apparatus according to claim 1, wherein the region of the image is encoded again using the quantization step updated by said quantization step control means in the second stage is provided by Wine and Boyce as noted above for at least claim 1.

For claim 17, see the rejection of at least claim 1.

For claim 27, a computer readable memory for storing a program code that implements an image processing method cited in claim 17 is provided by Wine in at least c. 9, lines 42-58.



Art Unit: 2625

### Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M Johnson whose telephone number is 703-306-3096. The examiner can normally be reached on Monday – Friday from 5:30 to 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta, can be reached on Monday – Friday from 9:30 to 5:00. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy M. Johnson  
Patent Examiner  
Art Unit 2625  
March 20, 2004

  
TIMOTHY M. JOHNSON  
PRIMARY EXAMINER